

§ 77.502 Electric equipment; examination, testing, and maintenance.

Electric equipment shall be frequently examined, tested, and properly maintained by a qualified person to assure safe operating conditions. When a potentially dangerous condition is found on electric equipment, such equipment shall be removed from service until such condition is corrected. A record of such examinations shall be kept.

§ 77.502-1 Qualified person.

A qualified person within the meaning of § 77.502 is an individual who meets the requirements of § 77.103.

§ 77.502-2 Electric equipment; frequency of examination and testing.

The examinations and tests required under the provision of this § 77.502 shall be conducted at least monthly.

§ 77.503 Electric conductors; capacity and insulation.

Electric conductors shall be sufficient in size and have adequate current carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating materials.

§ 77.503-1 Electric conductors.

Electric conductors shall be sufficient in size to meet the minimum current carrying capacity provided for in the National Electric Code, 1968. All trailing cables shall meet the minimum requirements for ampacity provided in the standards of the Insulated Power Cable Engineers Association—National Electric Manufacturers Association in effect when such cables are purchased.

§ 77.504 Electrical connections or splices; suitability.

Electrical connections or splices in electric conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.

§ 77.505 Cable fittings; suitability.

Cables shall enter metal frames of motors, splice boxes, and electric compartments only through proper fittings. When insulated wires, other than cables, pass through metal frames, the holes shall be substantially bushed with insulated bushings.

§ 77.506 Electric equipment and circuits; overload and short-circuit protection.

Automatic circuit-breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and circuits against short circuit and overloads.

§ 77.506-1 Electric equipment and circuits; overload and short circuit protection; minimum requirements.

Devices providing either short circuit protection or protection against overload shall conform to the minimum requirements for protection of electric circuits and equipment of the National Electric Code, 1968.

§ 77.507 Electric equipment; switches.

All electric equipment shall be provided with switches or other controls that are safely designed, constructed, and installed.

§ 77.508 Lightning arresters, ungrounded and exposed power conductors and telephone wires.

All ungrounded, exposed power conductors and telephone wires shall be equipped with suitable lightning arresters which are adequately installed and connected to a low resistance grounding medium.

§ 77.508-1 Lightning arresters; wires entering buildings.

Lightning arresters protecting exposed telephone wires entering buildings shall be provided at the point where each such telephone wire enters the building.

§ 77.509 Transformers; installation and guarding.

(a) Transformers shall be of the totally enclosed type, or shall be placed at least 8 feet above the ground, or installed in a transformer house, or surrounded by a substantial fence at least